AMENDMENTS TO THE CLAIMS

1 – 32. (cancelled)

33. (new) An electric motor comprising:

a motor casing being generally cylindrical and having opposed open ends;

a stator assembly disposed in the interior of the motor casing, the stator assembly having a generally cylindrical shape to define an internal bore;

a rotor shaft assembly disposed in the internal bore of the stator assembly and including a shaft;

a pair of casing closures sized and adapted to close the open ends of the motor casing, each of the casing closures including bearing assemblies adapted to support the shaft and substantially seal the interior of the motor casing; and

a cured, thermally-conductive coating material which both substantially covers the stator assembly and physically contacts the interior of the motor casing, thereby thermally connecting the stator assembly to the motor casing.

34. (new) An electric motor according to claim 33, further comprising:

an electrical inlet disposed on the motor casing;

a conduit box having a conduit inlet, the conduit box mounted to an exterior of the casing such that the conduit inlet is substantially aligned with the electrical inlet;

a plurality of electrical wires adapted to provide power to the stator assembly, the electrical wires passing from the interior of the motor casing into the conduit box through the electrical inlet and the conduit inlet;

wherein the coating material extends from the interior of the casing through the electrical inlet and the conduit inlet to encapsulate the electrical wires and cover a bottom portion of the electrical wires extending into the conduit box.

35. (new) An electric motor according to claim 34 further including:

a transition box having an arc-shaped face for contacting the motor casing disposed between the motor casing and conduit box.

36. (new) An electric motor according to claim 34, further comprising a heat shrink tube having an adhesive lining adapted to seal the connection at the ends of the electrical wires.

37. (new) An electric motor according to claim 33, wherein the coating material is impervious to moisture and is formed from a curable liquid resin including a powdered ceramic material.

33. (new) An electric motor according to claim 33, wherein at least one of the bearing assemblies comprises a ball bearing, a shaft lip seal, and a one way check seal.

39. (new) An electric motor according to claim 33, wherein at least one of the bearing assemblies comprises a slinger disposed on an outer face of at least one of the bearing assemblies.

40. (new) An electric motor according to claim 33, wherein the motor casing is manufactured from stainless steel.

41. (new) An electric motor according to claim 33, at least one of the end closures including at least one breather plug.

42. (new) An electric motor according to claim 41, wherein the breather plug is constructed from Goretex®.

43. (new) An electric motor according to claim 41, wherein the breather plug is constructed from expanded polytetraflouroethylene.

44. (new) An electric motor according to claim 33, wherein an operative end of the shaft extends outside the motor casing through the first end bell, and wherein the non-operative end of the shaft is enclosed in the motor casing by being disposed in a correspondingly sized slot in a second end bell.

45. (new) An electric motor comprising:

a stator assembly including a generally cylindrical core defining a stator bore and wire windings housed in the core and extending outward from ends of the core;

a rotor shaft assembly disposed in the stator bore of the stator assembly and including a generally cylindrical rotor affixed to a shaft extending along the central axis, the shaft including a first, operative end extending outward from the casing and a second end;

a generally open-ended motor casing adapted to house the stator assembly and the rotor shaft assembly in the interior thereof;

a first end bell and a second end bell adapted to close the opposed open ends of the motor casing and substantially seal the interior of the motor casing from the exterior thereof, the first end bell and the second end bell including bearing assemblies for rotationally supporting the rotor shaft assembly;

a conduit box mounted on the exterior of the casing, the conduit box having electrical access to the interior of the casing through an electrical inlet disposed on the exterior of the casing, wherein a plurality of electrical wires connected to the stator assembly pass from the interior of the casing through the electrical inlet into the conduit box; and

a thermally-conductive coating material adapted to encapsulate the wire windings of the stator assembly;

wherein the cured coating material physically contacts both the stator assembly and the interior of the motor casing, thereby transferring heat from the motor windings to the motor casing when the motor is running, and a portion of the cured coating material extends from the interior of the motor casing into the conduit box through the electrical inlet to encapsulate the electrical wires and cover a portion of the electrical wires extending into the conduit box.

46. (new) An electric motor according to claim 45, further comprising a heat shrink tube having an adhesive lining adapted to seal the connection at the ends of the electrical wires extending into the conduit box.

47. (new) An electric motor according to claim 45, wherein the coating material is impervious to moisture and is formed from a curable liquid resin including a powdered ceramic material.

48. (new) An electric motor according to claim 45, wherein at least one of the bearing assemblies comprises a ball bearing, a shaft lip seal , and a one way check seal.

49. (new) An electric motor according to claim 45, wherein at least one of the bearing assemblies comprises a slinger disposed on an outer face of at least one of the bearing assemblies.

50. (new) An electric motor according to claim 45, wherein the motor casing is manufactured from stainless steel.

51. (new) An electric motor according to claim 45, at least one of the end closures including at least one breather plug.

52. (new) An electric motor according to claim 51, wherein the breather plug is constructed from Goretex®.

53. (new) An electric motor according to claim 51, wherein the breather plug is constructed from expanded polytetraflouroethylene.

54. (new) An electric motor according to claim 45, wherein an operative end of the shaft extends outside the motor casing through the first end bell, and wherein the non-operative end of the shaft is enclosed in the motor casing by being disposed in a correspondingly sized slot in a second end bell.

55. (new) An electric motor comprising:

a motor casing being generally cylindrical and having open ends;

a stator assembly disposed in an interior of the casing, the stator assembly having a generally cylindrical shape to define an internal bore;

a heat conductive resin encapsulating the stator assembly and thermally connecting the stator assembly to the motor casing;

a pair of casing closures sized and adapted to close the open ends of the casing, at least one of the casing closures having a shaft bore;

a rotor shaft assembly disposed in the internal bore of the stator assembly and including a shaft, at least one end of the shaft extending outside the casing through the shaft bore of at least one of the casing closures;

a bearing assembly adapted to rotationally support the shaft extending outside the motor casing through the shaft bore; and wherein the casing closures and the bearing assembly are adapted to substantially seal the interior of the casing.

56. (new) An electric motor according to claim 55, wherein the coating material is impervious to moisture and is formed from a curable liquid resin including a powdered ceramic material.

57. (new) An electric motor according to claim 55 having first and second bearing assemblies, and wherein at least one of the bearing assemblies comprises a ball bearing, a shaft lip seal, and a one way check seal.

58. (new) An electric motor according to claim 57, wherein at least one of the bearing assemblies comprises a slinger disposed on an outer face of at least one of the bearing assemblies.

59. (new) An electric motor according to claim 55, wherein the motor casing is manufactured from stainless steel.

60. (new) An electric motor according to claim 55, at least one of the casing closures including at least one breather plug.

61. (new) An electric motor according to claim 60, wherein the breather plug is constructed from Goretex®.

62. (new) An electric motor according to claim 60, wherein the breather plug is constructed from expanded polytetraflouroethylene.

63. (new) An electric motor according to claim 55, further comprising:

an electrical inlet disposed on the motor casing;

a conduit box having a conduit inlet, the conduit box mounted to an exterior of the motor casing such that the conduit inlet is substantially aligned with the electrical inlet;

a plurality of electrical wires adapted to provide power to the stator assembly, the electrical wires passing from the interior of the casing into the conduit box through the electrical inlet and the conduit inlet; and

at least one seal disposed between the conduit box and the casing to substantially seal the electrical inlet of the casing.

64. (new) An electric motor according to claim 63 further including:

a transition box having an arc-shaped face for contacting the motor casing disposed between the motor casing and conduit box.

65. (new) An electric motor according to claim 55, wherein the bearing assembly further comprises:

a shaft washer, a retainer ring, a sealed ball bearing and a slinger.

66. (new) Apparatus in accordance with claim 65, further including a one-way check seal disposed between the shaft-bored casing closure and the slinger.